

1st Meeting of the **EAVP**



Natural History Museum Basel
Augustinergasse 2
CH-4001 Basel
www.nmb.bs.ch

Abstracts with programm
Tuesday 15th of July to Saturday 19th of July

A “baby”-sauropod trackway from the Late Jurassic Courtedoux Dinosaur Tracksite Excavations, Canton Jura, Northern Switzerland

Daniel Marty¹ and Lionel Cavin², ¹Section de paléontologie, Office du patrimoine historique, Hôtel des Halles, Case Postale 64, 2900 Porrentruy, Switzerland, e-mail: Daniel.Marty@Palaeojura.ch, ²Department of Palaeontology, The Natural History Museum, Cromwell Road, London SW7 5BD, London, UK.

In 2002, the “Section de paléontologie” discovered and excavated a new dinosaur tracksite at Courtedoux on the future course of the “Transjurane“ highway. Intertidal to supratidal calcareous laminites of the Reuchenette Formation (Upper Kimmeridgian) contain at least 6 track-bearing levels in a total thickness of nearly 1 m. In 2002, the main track level has been excavated on a surface of about 650 m², revealing 2 trackways of theropods and 17 trackways of sauropods (Marty et al., submitted b). The latter belong to the ichnogenus *Parabrontopodus* (Lockley et al., 1994) being the first clear evidence in central Europe and the youngest well-dated evidence for this ichnogenus worldwide. The size range for the sauropod pes prints is between 34.4 and 46.8 cm length and between 27.0 and 35.7 width, which are the smallest known sauropod tracks in the Jurassic so far (Marty et al., submitted a). However, on an overlying level, about 2 m of a narrow gauge (interpedes distance/internal trackway width being about 13 cm) sauropod trackway segment has been excavated, exhibiting evidence for even smaller sauropods. The mean pes print length is about 20 cm and the mean width about 13.5 cm. The gleno-acetabular distance is about 0.8 m and according to the formula of Thulborn (1990: 252) a hip height of about 1.2 m results (hip height = 5.9 pes length). Such small sauropod tracks are only known from the Cretaceous Jindong Formation of South Korea (Lim et al., 1994) and Lockley (1994) attributes them to very young (post-hatchling) individuals in their first year of growth. The Courtedoux tracksite thus reveals the first ichnological evidence for Jurassic “baby”-sauropods.

The Courtedoux “Sur Combe Ronde” tracksite is a geotope or geosite of international importance and it will be protected over an area of approximately 1500 m² underneath an especially constructed highway-bridge. The site has the potential for development into one of the most important sauropod tracksites and it offers plenty of possibilities for future excavations and research, but also for public viewing and installation of an educational, tourist and interpretative center (Marty et al., submitted b).

References

- Lim, S.-K., Lockley, M.G., Yang, S.-Y., Fleming, R.F., Houck, K. 1994. A preliminary report on sauropod tracksites from the Cretaceous of Korea. *Gaia*, 10: 109-117.
- Lockley, M.G. 1994. Dinosaur ontogeny and population structure: Interpretations and speculations based on fossil footprints. In: Carpenter, K, Hirsch, K.F. & Horner, J.R. (eds), *Dinosaur Eggs and Babies*, Cambridge University Press, 347-365.
- Lockley, M. G., Farlow, J. O., & Meyer, C. A. 1994. *Brontopodus* and *Parabrontopodus* Ichnogen. nov. and the Significance of Wide- and Narrow-gauge Sauropod Trackways. *Gaia*, 10: 135-146.
- Marty, D., Cavin, L., Hug, W., Meyer, C.A. & Lockley, M.G. submitted a. Preliminary report of the new Courtedoux dinosaur tracksite from the Upper Kimmeridgian of Switzerland. *Ichnos*, Bill Sarjeant Memorial.
- Marty, D., Cavin, L., Hug, W., Jordan, P.A., Lockley, M.G. & Meyer, C.A. submitted b. The protection, conservation and sustainable use of the Courtedoux dinosaur tracksite, Canton Jura, Switzerland. *Revue de Paléobiologie*, special edition of the „3^e Symposium Georges Cuvier“.
- Thulborn, T. 1990. *Dinosaur Tracks*. Chapman & Hall, London, 410 pp.